

We claim:

- Sub B²
1. A composition comprised of a plurality of nucleocapsid protein monomers, the primary sequences of which are derived from duck hepatitis B virus, wherein said plurality of monomers are assembled to form a particle.
2. The composition of claim 1 wherein at least a first portion of said nucleocapsid protein monomers include a first hapten.
- Sub C²
3. The composition of claim 2 wherein at least a second portion of said nucleocapsid protein monomers includes a second hapten different from said first hapten.
4. The composition of claim 1 wherein said particle includes a nucleic acid.
5. The composition of claim 2 wherein said particle includes a nucleic acid.
6. The composition of claim 3 wherein said particle includes a nucleic acid.
7. The composition of claim 4 wherein said nucleic acid is selected from the group consisting of: SEQ IDs 3-19.
8. The composition of claim 5 wherein said nucleic acid is selected from the group consisting of: SEQ IDs 3-19.

1 9. The composition of claim ~~6~~ wherein said nucleic acid is selected from the
2 group consisting of: SEQ IDs 3-19.

13C 10. The composition of claim 2 wherein said first hapten is associated with a
2 disease condition caused by an agent selected from the group consisting of:
3 single stranded DNA viruses, double stranded DNA viruses, single stranded
4 RNA viruses, double stranded RNA viruses, intracellular parasites, fungi,
5 bacteria, and cancer.

1 11. The composition of claim 3 wherein said second hapten is associated with a
2 disease condition caused by an agent selected from the group consisting of:
3 single stranded DNA viruses, double stranded DNA viruses, single stranded
4 RNA viruses, double stranded RNA viruses, intracellular parasites, fungi,
5 bacteria, and cancer.

1 12. The composition of claim 1 further comprising first and second haptens and
2 said particle is assembled as an extrinsic mosaic.

1 13. The composition of claim 1 further comprising first and second haptens
2 intrinsic to said nucleocapsid protein monomers and said particle is assembled
3 as an intrinsic mosaic.

14. A method of delivering nucleic acids to a subject in need thereof, comprising, administering to said subject a composition comprised of a nucleic acid and a plurality of nucleocapsid protein monomers, the primary sequences of which are derived from duck hepatitis B virus, wherein said plurality of

1 19. The method of claim ~~17~~, further comprising the step of adding a nucleic acid
2 to said mixture produced during said exposing step.

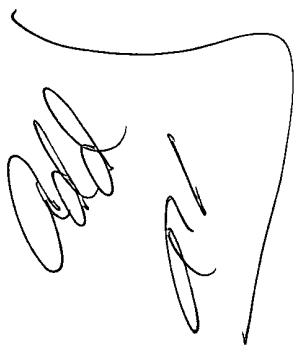
- 1 20. The method of claim 17, wherein said charged agent used in said exposing
2 step is a divalent cation selected from the group consisting of: Mg^{+2} , Zn^{+2} , Ba^{+2} ,
3 Sr^{+2} , Ca^{+2} and Pb^{+2} .

sub B4

- 1 21. A method for eliciting an immunogenic response in a patient in need
2 thereof, comprising the step of administering to said patient an effective amount
3 of a composition comprised of a plurality of nucleocapsid monomers, the
4 primary sequences of which are derived from duck hepatitis B virus, wherein
5 said plurality of monomers are assembled to form a particle.

- 1 22. The method of claim 21 wherein said composition further comprises a
2 nucleic acid incorporated within said particle.

- 1 23. The method of claim 21 wherein said composition further comprises one or
2 more haptens associated with at least a portion of said plurality of nucleocapsid
3 monomers.

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